START

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

JUL 29 1994

94-RPS-268

Mr. Douglas R. Sherwood
Hanford Project Manager
U.S. Environmental Protection Agency
712 Swift Boulevard, Suite 5
Richland, Washington 99352

Mr. David C. Nylander
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 1386, MSIN N1-08
Richland, Washington 99352

Dear Messrs. Sherwood and Nylander:

SUBMITTAL OF THE SIMULATED HIGH LEVEL WASTE SLURRY TREATMENT/STORAGE UNIT CLOSURE PLAN, REVISION 6 (TSD: TS-3-4)

Attached for your review is the Simulated High Level Waste Slurry Treatment and Storage (SHLWS T/S) Unit Closure Plan, Revision 6. This plan includes revisions agreed upon by the Washington State Department of Ecology (Ecology), U.S. Department of Energy, Richland Operations Office (RL), and Pacific Northwest Laboratory (PNL) staff as a result of internal reviews and the Data Quality Objectives (DQO) process for the sampling and analysis plan portion of the document. Participants in the DQO process included representatives of Ecology, RL, and PNL. Additional revision was necessary to update the plan with current regulations and practices since the submittal of Revision 5 in June 1990.

It is the intent of RL and PNL to initiate sampling and analysis activities when the Sampling and Analysis Plan portion of the closure plan has been reviewed by Ecology. This submittal contains the following enclosures:

- SHLWS T/S Closure Plan, Revision 6
- State Environmental Policy Act Checklist

Copies of this submittal will distributed to representatives of your respective organizations as follows:

- D. L. Duncan, U.S. Environmental Protection Agency (2 copies)
- G. P. Davis, Ecology, Richland (4 copies)
- J. J. Witczak, Ecology, Lacey (2 copies)

Should you have any questions or require any additional information regarding this submittal, please contact Mr. R. N. Krekel of RL on (509) 376-4264 or Mr. H. W. Slater of PNL on (509) 376-0575.

Sincerely,

James E Rasmussen

James E. Rasmussen, Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy

EAP:RNK

B. D. Shipp

B. D. Shipp, Manager
Engineering Technology Center
Pacific Northwest Laboratory

Enclosure

cc w/encl:
Administrative Records, H6-08
W. Burke, CTUIR
G. P. Davis, Ecology
D. L. Duncan, EPA
R. Jim, YIN
D. Powaukee, NPT
J. J. Witczak, Ecology

cc w/o encl:
L. D. Arnold, WHC
T. D. Chikalla, PNL
R. H. Engelmann, WHC
F. A Ruck, WHC
B. D. Shipp, PNL
R. F. Stanley, Ecology

ENCLOSURE 1

STATE ENVIRONMENTAL POLICY ACT (SEPA)

CHECKLIST

FOR THE

SIMULATED HIGH-LEVEL WASTE TREATMENT AND STORAGE UNIT

RCRA CLOSURE PLAN

REVISION 1

June 20, 1994

WASHINGTON ADMINISTRATIVE CODE
ENVIRONMENTAL CHECKLIST FORMS
[WAC 197-11-960]

A. BACKGROUND

1. **Name of proposed project, if applicable:**

   Closure of the Simulated High-Level Waste Slurry Treatment and Storage (SHLWS T/S) Unit

2. **Name of applicants:**

   U.S. Department of Energy, Richland Operations Office (DOE-RL); and Pacific Northwest Laboratory (PNL)

3. **Address and phone number of applicants and contact persons:**

   U.S. Department of Energy
   Richland Operations Office
   PO Box 550
   Richland, Washington 99352

   Pacific Northwest Laboratory
   Box 999
   Richland, Washington 99352

   Contact Persons:

   Steven H. Wisness,
   Acting Program Manager
   Office of Environmental Assurance
   Permits, and Policy

   T. D. Chikalla, Director
   Facilities and Operations
   (509) 376-2239

4. **Date checklist prepared:**

   June 20, 1994

5. **Agency requesting the checklist:**

   State of Washington
   Department of Ecology
   Mail Stop PV-11
   Olympia, Washington 98504-8711

6. **Proposed timing or schedule: (including phasing, if applicable):**

   Final closure activities will be completed and certified in accordance with the closure plan within 180 days after approval of this plan by the Washington State Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA).

7. **Do you have any plans for future additions, expansions, or further activity related to or connected with this proposal? If yes, explain.**

None

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

A RCRA Part A Permit application for the SHLWS T/S site was submitted on May 23, 1988, to the Washington State Department of Ecology. (A revision to the RCRA Part A Permit application is being submitted to Ecology concurrent with this checklist.)

9. **Do you know whether applications are pending for government approvals of other proposals directly affecting property covered by your proposal?**

There are no known pending applications for government approvals of other proposals directly affecting property covered by this proposal.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

Ecology is the lead agency authorized to approve the closure plan for the SHLWS T/S site under requirements authorized by the Resource Conservation and Recovery Act (RCRA), and Chapter 70.105 of the Revised Code of Washington (RCW). Except for the Part A Permit identified in item 8 above, no other permits are known to be required at this time.

11. **Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.**

This project proposes a clean closure strategy for the final closure of the SHLWS T/S Unit.

The unit is located in the 3000 Area of the Hanford Site. The unit, used for treatment and storage of the material, comprises a total area of approximately 7800 square feet.

Closure of the unit will include soil sampling. Other activities may include removing regulated waste to acceptable action levels, removing and/or decontaminating equipment and other materials containing or contaminated with dangerous waste or waste residues from the unit. Post closure monitoring is not required because the current plan envisions clean closure in which no regulated waste will remain after

completion of closure. If clean closure cannot be achieved, a post closure monitoring plan will be prepared and enacted.

The project is intended to return the land to a condition that will support its original use.

12. **Give the location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The unit is located in the 3000 Area of the Hanford Site at approximately 46° 20' 52" latitude and 119° 16' 54" longitude. Maps and detailed plans are included in the closure plan.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. **General description of the site: Flat, rolling, hilly, steep slopes, mountainous, other.**

Flat

b. **What is the steepest slope on the site (approximate percent slope)?**

The approximate slope of the land at the SHLWS unit is less than one percent.

c. **What general types of soils are found on the site? (for example, clay, sandy gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

The soil at the unit consists of compact sand and gravel material with excellent drainage characteristics. No farming is permitted on the Hanford Site.

d. **Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

No

e. **Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate the source of the fill.**

It is anticipated that the requirement for fill material will not be significant.

f. **Could erosion occur as a result of clearing, construction, or use?**

Due to the flat topography, dry climate, and soil type present at the unit, only a minimal amount of erosion is expected.

g. **Approximately what percentage of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

None

h. **Proposed measures to reduce or control erosion, or other impacts to the earth, if there are any?**

None at this time.

2. <u>Air</u>

a. **What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.**

Little or no dust will be generated from activities associated with closure.

b. **Are there any off-site sources of emissions or odors that may affect your proposal? if so, generally describe.**

None

c. **Proposed measures to reduce or control emissions or other impacts to the air, if any?**

None at this time.

3. Water

a. Surface

1) **Is there any surface water body in or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Yes. There are three aquifer recharge ponds or basins situated some 750-1000 feet east of the site. (These ponds receive water pumped from the Columbia River.) Water from these ponds recharges the aquifer, which is pumped by the City of Richland to supplement the municipal water supply.

2) **Will the project require any work over, in, or adjacent to (within 200 feet of) the described waters? If yes, please describe and attach available plans.**

No

3) **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of the fill.**

None

4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No

5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No

6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No

b. **Ground**

1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.**

No

2) **Describe waste materials that will be discharged into the ground from septic waste tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

A small quantity of nonregulated rinse solution may be discharged into the domestic sewer of the City of Richland or the 300 Area Process Sewer. Permission will be obtained from the City before any discharge is made.

c. **Water Run-off (including storm water)**

1) **Describe the source of run-off (including storm water) and methods of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other wastes? If so, describe.**

The Hanford Site is an arid climate, which averages less than 8 inches of annual precipitation. Most of the runoff is the result of rain or snowmelt. There are currently no plans for collecting or disposing of runoff at the unit.

Most of this precipitation is returned to the atmosphere through evapotranspiration. Precipitation which is not returned to the atmosphere through evapotranspiration and infiltrates into the soil could cause contaminants to leach deeper into the underlying soil.

2) **Could waste materials enter ground or surface waters? If so, generally describe.**

Yes. It is possible that runoff could become slightly contaminated by picking up small amounts of contaminates from the soil surface. This runoff could then infiltrate into the soil.

d. **Proposed measures to reduce or control surface, ground, and run-off water impacts, if any:**

None

4. **Plants**

a. **Check the types of vegetation found onsite.**

____ deciduous tree
____ evergreen tree
____ shrubs
____ grass
____ pasture
____ crop or grain
____ wet soil plants
____ water plants
____ other types of vegetation

There is no vegetation at the site.

b. **What kind and amount of vegetation will be removed or altered?**

None

c. **List threatened or endangered species known to be on or near the site.**

None

d. **Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

None

5. **Animals**

a. **Identify any birds and animals which have been observed on or near the site or are known to be on or near the site:**

Birds: hawk, heron, eagle, songbirds, other
Mammals: deer, bear, elk, beaver, other
Fish: bass, salmon, trout, herring, shellfish, other

The SHLWS T/S is an industrial location. Some birds, and small animals common to the Hanford Site have been observed in the general vicinity of the SHLWS T/S site, e.g., gulls and coyotes.

b. **List any threatened or endangered species known to be on or near the site.**

The SHLWS T/S site isn't known to be used by any threatened or endangered species.

c. **Is the site part of a migration route: If so, explain.**

No. However, the Hanford Site as a whole is part of a migration route for some birds. The region bounding the Columbia River (opposite the Hanford Site) is used as a resting place for Pacific flyway waterfowl and shore birds during the autumn migration.

d. **Proposed measures to preserve or enhance wildlife, if any:**

None

6. **Energy and Natural Resources**

a. **What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

Fuel will be consumed by motor vehicles and a steam cleaning system which may be used for decontaminating purposes at the unit.

b. **Would your project affect the potential use of solar energy by adjacent properties: If so, generally describe.**

No

c. **What kind of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

None

7. **Environmental Health**

a. **Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

Environmental health hazards are not expected. However, the potential for exposure to hazardous material during the sampling, and decontamination effort does exist. Procedures to prevent and manage hazards are presented in the closure plan.

1) **Describe special emergency services that might be required.**

Hanford Site security, fire response, and ambulance services in addition to City of Richland fire response and ambulance services are on call at all times in the event of an onsite emergency.

2) **Proposed measures to reduce or control environmental health hazards, if any:**

Environmental health hazards are expected to be minimal. Procedures to prevent and manage potential hazards are presented in the closure plan.

b. Noise

1) **What type of noise exists in the area which may affect your project (for example: traffic, equipment, operation, etc.)?**

None

2) **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, etc.)? Indicate what hours noise would come from the site.**

A short-term increase in noise may occur as a result of equipment use to support the closure activities.

3) **Proposed measures to reduce or control noise impacts, if any:**

None

8. <u>Land and Shoreline Use</u>

a. **What is the current use of the site and adjacent properties?**

The SHLWS T/S unit is located in the 1234 ICF/Kaiser laydown yard, and is part of the Hanford Site, which contains many facilities for waste management and special nuclear materials production. The unit provided storage and treatment of simulated high level waste slurry that was originally to be used for experimental waste treatment programs. The material was treated in September and October of 1988. The unit is no longer operational. Treated waste has been removed from the unit and transported to a solid waste landfill authorized to receive such material. The adjacent properties are being closed as industrial storage areas.

b. **Has the site been used for agriculture? If so, describe.**

No portion of the Hanford Site, including the SHLWS T/S unit has been used for agricultural purposes since 1943.

c. **Describe any structures on the site.**

Except for a chain link fence surrounding the SHLWS T/S unit, there are no other permanent structures at the unit.

d. **Will any structures be demolished? If so, what?**

None

e. **What is the current zoning classification of the site?**

The SHLWS T/S site area is zoned by the City of Richland, as **Light Industrial**.

f. **What is the current comprehensive plan designation of the site?**

The City of Richland Comprehensive Land Use Plan designates the SHLWS T/S site as **Industrial**.

g. **If applicable, what is the current master shoreline program designation of the site?**

Does not apply

h. **Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.**

No

i. **Approximately how many people would reside or work in the completed project?**

None

j. **Approximately how many people would the completed project displace?**

None

k. **Proposed measures to avoid or reduce displacement impacts, if any:**

None

l. **Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

Does not apply

9. **Housing**

a. **Approximately how many units would be provided, if any? Indicate whether high-, middle-, or low-income housing.**

None

b. **Approximately how many units, if any, would be eliminated? Indicate whether high-, middle-, or low-income housing.**

None

c. **Proposed measures to reduce or control housing impacts, if any:**

Does not apply

10. **Aesthetics**

a. **What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

Does not apply

b. **What views in the immediate vicinity would be altered or obstructed?**

None

c. **Proposed measures to reduce or control aesthetic impacts, if any:**

None

11. **Light and Glare**

a. **What type of light or glare will the proposal produce? What time of day would it mainly occur?**

None

b. **Could light or glare from the finished project be a safety hazard or interfere with views?**

No

c. **What existing off-site sources of light or glare may affect your proposal?**

None

d. **Proposed measures to reduce or control light and glare impacts, if any:**

None

12. **Recreation**

a. **What designated and informal recreational opportunities are in the immediate vicinity?**

None

b. **Would the proposed project displace any existing recreational uses? If so, describe.**

Does not apply

c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any?**

Does not apply

13. **Historic and Cultural Preservation**

a. **Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.**

No places or objects listed on, or proposed for, national, state, or local preservation registers are known to be on or next to the unit.

b. **Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**

There are no known archaeological, historical, or Native American religious sites on or next to the unit.

c. **Proposed measures to reduce or control impacts, if any:**

Does not apply

14. Transportation

a. **Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

Does not apply

b. **Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?**

The unit is not publicly accessible and therefore, is not served by public transit.

c. **How many parking spaces would the completed project have? How many would the project eliminate?**

None

d. **Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).**

No

e. **Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

No

f. **How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**

None

g. **Proposed measures to reduce or control transportation impacts, if any:**

Does not apply

15. **Public Services**

a. **Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

No

b. **Proposed measures to reduce or control direct impacts on public services, if any:**

Does not apply

16. **Utilities**

a. **List utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:**

None

b. **Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

None

SIGNATURES

The above answers are true and complete to the best of my knowledge. We understand that the lead agency is relying on them to make its decision.

Steven H. Wisness,
Acting Program Manager
Office of Environmental Assurance,
Permits, and Policy
Department of Energy
Richland Operations Office

7/22/94
Date

for T. D. Chikalla, Director
Facilities and Operations
Pacific Northwest Laboratory

6-22-94
Date

CORRESPONDENCE DISTRIBUTION COVERSHEET

Author	Addressee	Correspondence No.
J. E. Rasmussen, RL B. D. Shipp, PNL	D. R. Sherwood, EPA D. C. Nylander, Ecology	Incoming 9405703

Subject: SUBMITTAL OF THE HIGH LEVEL WASTE SLURRY TREATMENT/STORAGE UNIT CLOSURE PLAN, REVISION 6 (TSD: TS-3-4)

INTERNAL DISTRIBUTION

Approval	Date	Name	Location	w/att
		Correspondence Control	A3-01	
		L. D. Arnold	B2-35	
		W. T. Dixon, Assignee	H6-21	
		P. J. Mackey	B3-15	
		H. E. McGuire, Sr. Staff	B3-63	
		S. M. Price	H6-23	
		F. A. Ruck III	H6-23	
		EPIC	H6-08	
		LOS File	H6-23	
		RCRA FILES/GHL	H6-23	
		FAR/LB	H6-23	